In the Claims:

1.   (original) A method of automatically verifying the authenticity of a printed document which includes printed human readable data and corresponding machine readable data, the method comprising the steps of:

(a)   scanning the document to generate a scanned image;

(b)   interpreting the individual characters printed as human readable data and interpreting the individual characters printed as machine readable data;

(c)   assessing the probability that any mismatch between the individual characters interpreted from the human readable data and the machine readable data has arisen through errors or artefacts introduced in printing or scanning the document and not deliberate falsification of the human readable data.

2.   (original) The method of Claim 1 in which individual characters are encoded in the machine readable data.

3.   (original) The method of Claim 2 in which the form of encoding deployed for the machine readable data is a function of the encoding used to construct the human readable data.

4.   (original) The method of Claim 3 in which the encoding of a given character that might appear in both the human readable text and the machine readable text is such that the chance of inaccurately interpreting the character when in the human readable data as a different character is inversely

proportional to the chance of inaccurately interpreting the same character as the same different character when in the machine readable data.

5.   (currently amended) The method of ~~any preceding~~ Claim 1 in which the assessed probability of mismatch arising through printer or scanner error or artefact is a function of the quality of the scanned image.

6.   (original) The method of Claim 5 in which the assessed probability is increased as image quality decreases.

7.   (currently amended) The method of Claim 5 [[or 6]] in which image quality is measured as a function of one or more of: the lightness or darkness of the image; the contrast of the image; whether features of known shape in the document appear in a similar shape in the scanned image; the degree of adjustment required to make mismatched characters match; mismatch from MICR data; orientation accuracy of the scanned image.

8.   (original) The method of Claim 5 in which the assessed probability is a function of the relative position or distribution of any mismatches such that clustered mismatches decrease the probability that the mismatches arise through printer or scanner error or artefact.

9.   (currently amended) The method of ~~any preceding~~ Claim 1 in which the assessed probability is a function of the font used for the machine readable data.

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10.   (currently amended) The method of ~~any preceding Claims 5 - 9~~ <u>Claim 5</u> in which the assessed probability is a function of rules specified by a human operator or empirically derived by analysing extensive manual assessments made by skilled operators of different kinds of mismatches.

11.   (currently amended) The method of ~~any preceding~~ Claim <u>1</u> comprising the steps of:

(a)   establishing a first probability based interpretation of the human readable text;

(b)   establishing a second probability based interpretation of the machine readable text;

(c)   assessing the probability by comparing the probability based interpretations.

12.   (original) The method of Claim 11 in which the first probability based interpretation and the second probability based interpretation uses a metric specifically tailored to one or more of: printer performance; scanner performance; image quality; operator assigned rules.

13.   (original) The method of Claim 12 in which the assessment of the probability uses a metric specifically tailored to one or more of: printer performance; scanner performance; image quality; operator assigned rules.

14. (currently amended) The method of ~~any preceding~~ Claim 1 in which the document is not submitted to further scrutiny if the assessment of probability is above a predefined threshold.

15. (currently amended) The method of ~~any preceding~~ Claim 1 in which the document is submitted to further scrutiny if the assessment of probability is below a predefined threshold.

16. (currently amended) The method of Claim ~~14 or~~ 15 in which the threshold can be varied by an operator depending on one or more of printer performance; scanner performance; image quality; operator assigned rules.

17. (currently amended) The method of ~~any preceding~~ Claim 1 comprising the steps of:

(a) Encoding algebraically human readable data from a check, where the data is in the form of characters from a known alphabet, converting the algebraic information into a machine readable graphical form, printing the graphical form onto the check at the same time as the human readable data is printed;

(b) Scanning the said check;

(c) Reading the human readable data using an OCR scheme which allocates probabilities of each member of the alphabet corresponding to any feature identified as a character;

(d)   Reading the machine readable data and allocating probabilities of each member of the alphabet corresponding to any feature identified as a character in the machine readable data;

(e)   Comparing the resulting sets of probabilities and establishing an overall probability that any mismatch is due to reading error rather than deliberate falsification.

18.   (original) The method of Claim 17 where the form of coding of the machine readable graphical is dependent upon the characteristics and retrievability of the human readable data.

19.   (original) The method of Claim 18 where the Hamming distance between binary representations of a pair of characters will be greatest for those pairs which are least likely to be easily differentiated by an OCR method.

20.   (original) The method of Claim 17 where the machine readable data consists of independent segments that enable recovery of partial information when there is localised degradation.

21.   (original) The method of claim 17 where the analysis of the machine readable data provides a measure of the degradation of the image of the check and this measure in turn and assists in the attribution of probabilities to the likelihood of a mismatch arising through printer or scanner errors or artefacts and not deliberate falsification.

22.   (original) The method of claim 17 where the degradation of the human readable data is assessed by image processing methods and assists in the attribution of probabilities to the likelihood of a mismatch arising through printer or scanner errors or artefacts and not deliberate falsification.

23.   (original) The method of claim 17 where the probability of occurrence of fraud is a known distribution and an algorithm exists which combined with the above probabilities provides a rule for selecting likely exceptions.

24.   (original) The method of claim 23 where the probability is assessed with reference to the distribution of errors within the text.

25.   (original) The method of claim 17 where the set of elements that make up a character in the representation in graphical form are distributed throughout that form so as to survive moderate localised degradation.

26.   (currently amended) A document that has been subject to automatic verification using the method as defined in any preceding Claim 1 [[- 25]].

27.   (original) The document of Claim 26, which is a check.